

Appln. No. 10/763,734
Amendment dated February 26, 2009
Reply to Office Action mailed December 3, 2008

REMARKS

Reconsideration is respectfully requested.

Status of Claims

Claims 6, 9, 14, 15, 20, 22 through 24 and 26 have been cancelled.

No claims have been withdrawn.

Claim 29 has been added.

Therefore, claims 1 through 5, 8, 10 through 13, 16 through 19, 21, 25, and 27 through 29 are under consideration in this application.

Paragraph 5 of the Office Action

Claims 1 and 8 have been objected to as having informalities

Claims 1 and 8 have been amended in a manner submitted to overcome the objections in paragraph 5 of the Office Action.

Withdrawal of the objections to claims 1 and 8 is respectfully requested.

Paragraph 6 of the Office Action

Claims 1 through 5, 7, 10 through 13, 16 through 19, 21, 23, 25, 27, and 28 have been rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement for the reason that it is asserted in the rejection that the claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention

While it is believed that it is clear from the disclosure of the specification and drawings, as well as the claims as filed, that the user of the system is able to reserve a (reserved) portion of the total disk storage space of the grid computer for "local applications or local purposes of the

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user and is not available for use by the virtual disk storage system" (as stated on page 11, lines 28 through 30—emphasis added), and that this is not inconsistent with the requirement that the reserved portion of the disk storage space is not "available" for use by the computing grid (and therefore for use by the users of the computing grid). It is submitted that the portion of the specification of page 11 after the portion quoted in the rejection (which is highlighted above) informs one of ordinary skill in the art of this point.

Nevertheless, the requirements of claims 1, 13, and 21 have been amended to further clarify the point that the reserved portion and the available portion do not overlap, such as is depicted in Figure 4 of the drawings.

It is therefore submitted that the interpretation stated in the rejection of the Office Action is inaccurate with respect to the language of claims 1, 13, and 21.

Further, claim 28 has been amended to recite that "the reserved portion of the total disk storage space of the at least one grid computer is not available for use as a part of the virtual storage drive". See, for example, the specification at page 11, lines 27 through 30.

Withdrawal of the 35 USC 112 (first paragraph) rejection of the claims is respectfully requested.

Paragraphs 5 through 15 of the Office Action

Claims 1 through 4, 7, 11, 13, 16, 20, 23, 25 and 27 have been rejected under 35 U.S.C. §102(e) as being anticipated by Talluri.

Claims 1 through 5, 7, 10, 11, 13, 16, 18, 20, 22, 23 and 25 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Ebstye in view of Talluri.

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Claims 8 and 17 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Ebstye in view of Talluri and further in view of Ebata.

Claims 10 and 18 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Ebstye in view of Talluri and further in view of Wells.

Claims 12 and 19 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Ebstye in view of Talluri and further in view of Watkins.

Claims 8 and 17 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Talluri in view of Ebata.

Claims 10 and 18 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Talluri in view of Wells.

Claims 12 and 19 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Talluri in view of Watkins.

Claim 21 has been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Ebstye in view of Talluri and further in view of Ebata and Watkins.

Claim 1 requires, in part, "allocating, by the agent application, a reserved portion of the total disk storage space on the at least one grid computer to local use by the local user, the reserved portion of the total disk storage space on the at least one grid computer including the minimum amount of disk storage space designated by the local user to be reserved for local use by the local user" and "allocating, by the agent application, at least a portion of the total disk storage space on the at least one grid computer to be made available for use by users of the computing grid, the

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available portion excluding the reserved portion so that the reserved portion of the total disk storage space is not available for use by users of the computing grid" (emphasis added). Claim 1 also requires that "said designation of the minimum amount of total disk storage space to be reserved is made at the at least one grid computer subject to the disk storage space reservation by the local user of the at least one grid computer" (emphasis added). Claims 8, 13 and 21 include similar language.

The rejection of the claims based upon the Talluri patent application rests upon the assumption that a "minimum amount/percentage of unused storage space/capacity to be maintained/reserved on SG or at least one node is inherently defined/designed/set by the user in the storage policy. In other words, the admin/user of the storage system has to initially set the minimum amount/percentage described above in the storage policy" as is stated in the rejection.

As noted previously, the cited art is either unclear as to what entity sets limits on the amount of the disk storage that may be utilized by the system (and thus the allegedly inherency of this function is argued), or makes it clear that limits are set by an administrator of the grid system, and not by the local user of the grid computer. Even if one believes that the administrator initially sets the storage policy, this belief would not indicate to one of ordinary skill in the art that the administrator does not continue to exercise control over the storage policy, and does not indicate to the skilled that the local user is subsequently able to make changes in the storage policy, particularly with respect to "designation of a minimum amount of disk storage space to be reserved on the disk drive of the at least one grid computer for local use by the local user".

It is alleged in the rejection of at least claim 1 based upon the Talluri patent application that (emphasis added):

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wherein the designation of the minimum amount of disk storage space to be reserved is made at the at least one grid computer by the local user of the at least one grid computer (i.e. minimum amount/percentage of unused storage space/capacity to be maintained/reserved on SG or at least one node is inherently defined/designed/set by the user in the storage policy. In other words, the admin/user of the storage system has to initially set the minimum amount/percentage described above in the storage policy)

However, it is submitted that 1) neither the referenced portion nor the rest of the Talluri patent application discloses what entity sets the "storage policy", that 2) the statement quoted above from the rejection concedes that the "storage policy" may be set by an administrator of the Talluri system, and not "a local user of the at least one grid computer" as required by the claims, and that 3) the discussion in the Talluri patent application does not satisfy the requirements of an inherent disclosure as required by the law.

With respect to the first point, the rejection references paragraphs [0015] and [0016] of the Talluri patent application, which state:

[0015] As such, it is desirable to be able to install a storage policy, where a percentage of the storage capacity (either total storage capacity or unused storage capacity) on a server group (SG) or on a particular node may be shared globally with other resources on the network, on the fly, while a percentage of the same is dedicated solely to that particular server group (SG) or particular node. Such a policy provides an avenue for determining sharable data storage capacity, at any time, in terms of 'available/unused or total' capacity rather than just 'total' installed capacity and ensures efficient storage capacity utilization by storing data pertaining to a particular node (when data storage capacity for this node has been used) on a collection of other nodes on the network, thereby tapping into the unused data storage capacity and increasing the ROI (return on investment) for the enterprise as a whole.

[0016] Another example of a beneficiary of such a storage policy would be an 'application services provider' (ASP) where storage requirements and usage rapidly fluctuate. Consider such a company whose primary business is offering managed web-hosting services for their clients, who lease dedicated servers owned and managed by the company (service provider). Beyond a web presence, the clients' websites are further designed to accept customer data and sales orders for their merchandise/services. Such information is stored in databases

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on the servers. During instances when the data stored on a particular dedicated server is approaching the maximum available capacity (including the capacity on any direct attached storage system that may be connected to and made available to the server) and when the server cannot be taken down (as that would lead to an interruption of business activity)--the ability to seamlessly segment available data storage capacity on other servers (or server groups (SG)) and use a percentage of the same for storing data from this particular server would be a very potent option for the service provider. This may be done temporarily, until additional data storage resources are installed on this particular server or as a policy across all dedicated servers being managed by the service provider.

It is submitted that while these paragraphs discuss a storage policy in general, there is no indication of who sets the "storage policy" that is being discussed. This lack of disclosure appears to be conceded in the Office Action, as the rejection states that "unused storage space/capacity to be maintained/reserved on SG or at least one node *is inherently defined/designed/set* by the user in the storage policy".

As to the second point, the rejection states that "the admin/user of the storage system has to initially set the minimum amount/percentage described above in the storage policy" (emphasis added). Putting aside for the sake of discussion whether this is an accurate characterization of what is discussed in the Talluri patent application, the statement appears to admit that the "storage policy" is set by an administrator that is associated with the storage system of the Talluri system, and not "a local user of the at least one grid computer" as required by the claims. It is submitted that the rejection recognizes that the Talluri document does not disclose the requirements of the claims.

With respect to the third point, the law on establishing that a feature is inherently ("implicitly") present in a document is clear—the Patent Office must "provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art".

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The burden upon the office is more fully set forth in the MPEP at section 2112, which was reproduced in previous responses. It is submitted that the discussion in the Talluri patent application does not inherently establish that the storage policy is "receiv[ed] by the agent application on the at least one grid computer, from a local user of the at least one grid computer", as there is no evidence in Talluri that the claimed relationship "necessarily flows from the teaching" as required by the MPEP section 2112 quoted above. As noted previously, the discussion of the storage policy, and how it is set, is vague. Also, the statements in the rejection seem to imply that an administrator of the Talluri system sets the storage policy, and thus it is not set by the "local user of the at least one grid computer". It should be recognized that the language of the claim is very clear as to what qualifies as the local user, and this does not encompass the administrator of the Talluri system over the network system.

For the reasons set forth above, as well as other reasons not set forth, it is submitted that the Talluri patent does not lead one of ordinary skill in the art to the requirement of "'receiving by the agent application on the at least one grid computer, from a local user of the at least one grid computer, designation of a minimum amount of disk storage space to be reserved on the disk drive of the at least one grid computer for local use by the local user" as set forth in claims 1, 8, 13, and 21.

Turning to the rejections based upon the Ebstyne patent application, it is apparently conceded by the line of argument in the rejections that the Ebstyne patent application does not explicitly disclose the claimed requirements regarding the local user, and thus it is argued in the rejection that this is inherently included in the Ebstyne patent application. It is not clear from Ebstyne what entity controls the "client tier" of that system, and thus the rejection is based upon an argument that the "local user" must inherently control the client layer. As shown below, this is not the case, or at least the Ebstyne patent application is so unclear on this point that one of

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ordinary skill in the art would not be able to recognize that the claim requirements are present, at least not without the benefit of hindsight knowledge of the applicants' disclosure.

Looking to the referenced portion of the Ebstyne patent application at paragraph [0077], it is submitted that a careful reading of this portion of Ebstyne patent application suggests to one of ordinary skill in the art that the "client tier" reserves a portion of the "available storage space" for use by the system (which may be "relinquished" as needed), but does not reserve a portion of the disk space for use by the local user, particularly a reservation based upon a designation of a minimum amount set by the local user. Ebstyne states at paragraph [0077] that (emphasis added):

[0077] The client tier 46 exists in all of the plurality of enterprise personal computers 32 that are going to be used to recapture the unused disk space and brokers unused disk space by intelligently managing blocks of data sent to and from the service tier 42. The client tier 46 serves several functions, such as reserving a configurable portion of available storage space and reacting dynamically to the changing local environment. As local disk-space is used by local applications, the client tier 46 will relinquish the reserved storage space. As local storage space becomes free, the client tier 46 gradually assumes more of the storage space. For example, if the service tier 42 needs to write a certain amount of data, the client tier 46 determines the best one of the plurality of enterprise personal computers 32 for this particular amount of data to be stored based on its usage requirements.

Initially, it is noted that 1) the discussion in Ebstyne (and particularly paragraph [0077]) is not clear as to who controls the "client tier" on the "enterprise personal computer", that 2) the discussion in Ebstyne is directed to reserving storage space for the enterprise storage system of Ebstyne, and not "a minimum amount of disk storage space to be reserved on the disk drive of the at least one grid computer for local use by the local user" as required by the language of claim 1.

With respect to the first point, the discussion in the Ebstyne patent application does not discuss, and is not clear regarding, what entity controls

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the "client tier" on the enterprise personal computer. Claim 1 et al. requires that the designation come from "a local user of the at least one grid computer", and the Ebstyne patent application does not disclose this. One can speculate what entity reserves the configurable portion in Ebstyne, but that speculation is not sufficient to support a rejection. Merely because the client tier may reside on the enterprise personal computer does not disclose to one of ordinary skill in the art that a user of the enterprise personal computer is able to "reserve a configurable portion" of the disk space for the enterprise storage resource management system of Ebstyne. In fact, it is submitted that it would be counterintuitive for a user of the enterprise personal computer to be able to set the operation parameters of the enterprise storage resource management system.

With respect to the second point above, the Ebstyne patent application refers to reserving a portion of the disk drive of the enterprise personal computer for use by the enterprise storage resource management system, and not for "disk storage space to be reserved on the disk drive of the at least one grid computer for local use by the local user" as required by the claims. It is submitted that the local user is primarily concerned with the reservation of space for the local user's purposes.

It is therefore submitted that one of ordinary skill in the art would not be led to the requirements of the independent claims by either Ebstyne or a combination of Ebstyne with other cited patents and application publications.

Furthermore, as to any line of argument based upon a "definition" of local user" that would include the grid user of the virtual storage disk space, it is submitted that that is not a meaning that one of ordinary skill in the art would recognize. Furthermore, it is submitted that this "definition" is contrary to the literal wording of the claims, particularly as the requirements of the claim have been amended. It is submitted that one of

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ordinary skill in the art would not understand the term "local user" to include the administrator of the grid system, as is contended in the above text and the rejection. It is noted that the MPEP §2111 (II) states that:

Claim terms are presumed to have the ordinary and customary meanings attributed to them by those of ordinary skill in the art. *Sunrace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003); *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298 67 USPQ2d 1132, 1136 (Fed. Cir. 2003) ("In the absence of an express intent to impart a novel meaning to the claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art."). It is the use of the words in the context of the written description and customarily by those skilled in the relevant art that accurately reflects both the "ordinary" and the "customary" meaning of the terms in the claims. *Ferguson Beauregard/Logic Controls v. Mega Systems*, 350 F.3d 1327, 1338, 69 USPQ2d 1001, 1009 (Fed. Cir. 2003)

It is submitted that the interpretation of "local user" as including the administrator of the grid system is not the "ordinary and customary meaning" that would be attributed to the term by one of ordinary skill in the art. Further, it is submitted that the written description of the patent application indicates the difference between a "local user" and the administrator (e.g., the "grid manager"), and one skilled in the art would appreciate this distinction.

It is therefore submitted that the cited patents, and especially the various allegedly obvious combinations of Ebstye, Talluri, Ebata, Wells, and Watkins, set forth in the rejection of the Office Action, would not lead one skilled in the art to the applicant's invention as required by claims 1, 7, 8, 13, 21 and 25. Further, claims 2, 4, 5, 10 and 11, which depend from claim 1, claim 3, which depends from claim 2, claim 12, which depends from claim 4, claims 16 through 19 which depend from claim 13 and claim 23, which depends from claim 3 also include the requirements discussed above and therefore are also submitted to be in condition for allowance.

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Withdrawal of the §102(b) and §103(a) rejections of claims 1 through 5, 8, 10 through 13, 16 through 19, 21, 25, and 27 through 29 is therefore respectfully requested.

CONCLUSION

In light of the foregoing amendments and remarks, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,

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